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Governor

Lori F. Kaplan  
Commissioner

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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100 North Senate Avenue  
P. O. Box 6015  
Indianapolis, Indiana 46206-

6015

(317) 232-8603  
(800) 451-6027  
[www.state.in.us/idem](http://www.state.in.us/idem)

Mr. David R. Hirschey  
Rescar Industries, Inc.  
1723 West Walnut Street  
Washington, Indiana 47501

September 4, 2003

Re: 027-16864-00006  
Significant Source Modification to:  
Part 70 permit No.: T027-7723-00006

Dear Mr. Hirschey:

Rescar Industries, Inc. was issued a Part 70 operating permit T027-7723-00006 on August 20, 2001 for a railcar manufacturing and maintenance facility. An application to modify the source was received on February 28, 2003. Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

- (d) One (1) railcar cleaning facility, constructed in 2003 and located at Plant 3, consisting of the following:
  - (1) Two (2) degassing operations, identified as DG-01 and DG-02, used to remove the flammable commodities in the railcars, each with a maximum process rate of 2 railcars per day, controlled by a 15 MMBtu/hr natural gas-fired flare (FL-01), and exhausting through stack FL-01.
  - (2) Four (4) general cleaning operations, identified as CL-01, CL-02, CL-03, and CL-04, each with a maximum process rate of 2.5 railcars per day, exhausting through vent CV-01, controlled by one of the following control devices:
    - (A) VOC containing commodities, controlled by one (1) carbon adsorption system, identified as CC-01, exhausting through stack CC-01.
    - (B) For water soluble commodities, controlled by one (1) scrubbing system, identified as SC-01, exhausting through stack SC-01. The scrubbing water is directed to one (1) enclosed loop cleaning system, which consists of five (5) 3,000 gallon water tanks and is controlled by adsorption system CC-01.
  - (3) One (1) dig-out operation, identified as DO-01, used to remove the solid commodity in the railcars, with a maximum process rate of 1 railcar per day and 500 pounds of dirt per hour, exhausting through vent CV-02 (Insignificant Activity).
  - (4) One (1) natural gas fired boiler, identified as BO-01, with a maximum heat input capacity of 1.35 MMBtu/hr, providing steam to cleaning operation and drying operation, and exhausting through stack BO-01 (Insignificant Activity).

The following construction conditions are applicable to the proposed project:

## General Construction Conditions

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

This significant source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky  
Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments

ERG/YC

cc: File - Daviess County  
Daviess County Health Department  
Southwest Regional Office  
Air Compliance Section Inspector - Gene Kelso  
Compliance Data Section - Karen Nowak  
Administrative and Development - Sara Cloe  
Technical Support and Modeling - Michele Boner



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## PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Rescar Industries, Inc.  
1723 West Walnut Street  
Washington, Indiana 47501**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T027-7723-00006	
Issued by: Original Signed by Janet McCabe Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: August 20, 2001  Expiration Date: August 20, 2006
First Significant Source Modification No.: 027-16864-00006	Affected Pages: 1 through 4, 7 through 17

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Issued by: Original Signed by Paul Dubenetzky

Issuance Date: September 4, 2003

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1, A.3 and A.4 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

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The Permittee owns and operates a stationary railcar manufacturing and maintenance facility.

Responsible Official:	Director, Safety & Environmental
Source Address:	1723 West Walnut Street, Washington, Indiana 47501
Mailing Address:	1723 West Walnut Street, Washington, Indiana 47501
General Source Phone Number:	(812) 254-1121
SIC Code:	4789
County Location:	Daviess
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

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This railcar manufacturing and maintenance company consists of three (3) plants:

- (a) Plant 1, the abrasive blasting building, is located at 1723 West Walnut Street, Washington, Indiana; and
- (b) Plant 2, the paint and stencil building, is located at 1723 West Walnut Street, Washington, Indiana.
- (c) Plant 3, the railcar cleaning building, is located at 1723 West Walnut Street, Washington, Indiana.

Since the three (3) plants are located on contiguous properties, belong to the same industrial grouping, and under common control of the same entity, they will be considered one (1) source, effective from the date of issuance of this Part 70 permit. In this case, the word plant refers to separate buildings located at the same address.

### A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

- (a) A railcar sandblasting facility constructed in 1991 capable of processing six (6) railcars per day located in an enclosed building, with a baghouse as control, exhausting to one stack.
- (b) A railcar painting facility constructed in two phases; whereas, phase one commenced in 1973 and phase two commenced in 1993, with a maximum capacity of six (6) railcars per day, consisting of;

- (1) A paint shop with three (3) pumps and three (3) spray guns exhausting to six (6) exhaust fans identified as [P-01, P-02, P-03, P-04, P-05, P-06], each equipped with dry fiber filters as control; and
  - (2) A railcar stencil process constructed in 1993 with a maximum capacity of twenty-four (24) railcars per day, consisting of four (4) spray guns exhausting to four (4) exhaust fans identified as [S-07, S-08, S-09, S-10], each equipped with dry fiber filters as control.
- (c) A welding operation consisting of one (1) submerged arc station with a maximum hourly consumption of sixty (60) pounds of wire; twenty-two (22) metal inert gas stations with a maximum hourly consumption of fifty (50) pounds of wire per station; forty-eight (48) stick welding stations with a maximum hourly capacity of seventy-five (75), one ounce electrodes per station; and forty-eight oxy-methane flame-cutting stations with a maximum metal cutting rate of twenty (20) inches per minute.
- (d) One (1) railcar cleaning facility, constructed in 2003 and located at Plant 3, consisting of the following:
- (1) Two (2) degassing operations, identified as DG-01 and DG-02, used to remove the flammable commodities in the railcars, each with a maximum process rate of 2 railcars per day, controlled by a 15 MMBtu/hr natural gas-piloted flare (FL-01), and exhausting through stack FL-01.
  - (2) Four (4) general cleaning spots, identified as CL-01, CL-02, CL-03, and CL-04, with a total maximum process rate of 10 railcars per day, exhausting through vent CV-01. The emissions may be controlled by one of the following control devices:
    - (A) For VOC containing commodities, controlled by one (1) carbon adsorption system, identified as CC-01, exhausting through stack CC-01.
    - (B) For water soluble commodities, controlled by one (1) enclosed scrubbing system, identified as SC-01. The scrubbing water is directed to one (1) enclosed loop cleaning system, which consists of two (2) 4,000 gallon water tanks and is controlled by adsorption system CC-01.

A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]  
[326 IAC 2-7-5(15)]

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This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour [326 IAC 6-2-4]:
  - (1) Two (2) natural gas fired boilers, constructed after 1983, each with a maximum heat input capacity of 8.76 MMBtu/hr.
  - (2) One (1) natural gas fired boiler, identified as BO-01 and constructed in 2003, with a maximum heat input capacity of 7.0 MMBtu/hr, providing steam to cleaning operation and drying operation, and exhausting through stack BO-01.
- (b) Asbestos abatement projects regulated by 326 IAC 14-10.

- (c) A sand storage silo constructed in 1985 with a maximum capacity of 55 tons of sand and a maximum throughput of 15,685 tons of sand per year with a filter bag as emission control regulated by 326 IAC 6-3.
- (d) Other emission units, not regulated by a NESHAP, with PM<sub>10</sub> and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:
  - (1) One (1) dig-out operation, identified as DO-01, used to remove the solid material in the railcars, with a maximum process rate of 5,000 pounds of material per hour, exhausting through vent CV-02. [326 IAC 6-3-2]

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22).
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).



## SECTION D.2

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

- (b) A railcar painting facility constructed in two phases; whereas, phase one commenced in 1973 and phase two commenced in 1993, with a maximum capacity of six (6) railcars per day, consisting of:
- (1) A paint shop with three (3) pumps and three (3) spray guns exhausting to six (6) exhaust fans identified as [P-01, P-02, P-03, P-04, P-05, P-06], each equipped with dry fiber filters as control; and
  - (2) A railcar stencil process constructed in 1993 with a maximum capacity of twenty-four (24) railcars per day, consisting of four (4) spray guns exhausting to four (4) exhaust fans identified as [S-07, S-08, S-09, S-10], each equipped with dry fiber filters as control.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.2.1 Volatile Organic Compounds (VOC) Limitations

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or products may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of a daily volume - weighted average of 3.5 pounds of VOC per gallon of coating excluding water or 4.3 pounds of VOC per gallon of clear coating excluding water, as delivered to the applicator for any calendar day for air dried or forced warm air (less than 90EC or 194 EF) dried coatings.

Solvent sprayed from the application equipment during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

#### D.2.2 PSD Minor Limit [326 IAC 2-2]

This facility shall use less than 236 tons of VOC, including coatings, dilution solvents, and cleaning solvents, per twelve (12) consecutive month period with compliance determined at the end of each month. This usage limit, when combined with Condition D.5.2, is required to limit the potential to emit of VOC to less than 249 tons per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

#### D.2.3 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the PM from the paint shop and the stencil process shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where

E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

#### D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

## Compliance Determination Requirements

### D.2.5 Volatile Organic Compounds (VOC)

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Compliance with the VOC content and usage limitations contained in Conditions D.2.1 and D.2.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer.

### D.2.6 Volatile Organic Compounds (VOC)

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Pursuant to 326 IAC 8-1-2(a)(7), when volume weighted averaging of the coatings is used to determine compliance with the limitation set in condition D.2.1. This volume weighted average shall be determined by the following equation:

$$A = [ 3 (C \times U) / 3 U ]$$

Where: A is the volume weighted average in pounds VOC per gallon

C is the VOC content of the coating in pounds VOC per gallon

and U is the usage rate of the coating in gallons per unit, hour, day or other unit of time

### D.2.7 VOC Emissions

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Compliance with Condition D.2.1 and D.2.2 shall be demonstrated within 30 days of the end of each day based on the total volatile organic compound usage for the most recent month.

### D.2.8 Particulate Matter (PM)

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Pursuant to CP-027-2069-00006 and in order to comply with D.2.3, issued on September 30, 1991, the dry filters for PM control shall be in operation at all times when the paint shop and the stencil process are in operation.

## Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

### D.2.9 Monitoring

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- (a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth exhaust fans identified as P-01, P-02, P-03, P-04, P-05, P-06 and S-07, S-08, S-09, S-10 while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (b) Monthly inspections shall be performed of the coating emissions from the exhaust fans and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

## **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

### **D.2.10 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.2.1 and D.2.2, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.2.1 and D.2.2.
  - (1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
  - (2) A log of the dates of use;
  - (3) The volume weighted VOC content of the coatings used for each day;
  - (4) The cleanup solvent usage for each day;
  - (5) The total VOC usage for each day; and
  - (6) The weight of VOCs emitted for each compliance period.
- (b) To document compliance with Condition D.2.8 and D.2.9, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

### **D.2.11 Reporting Requirements**

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A quarterly summary of the information to document compliance with Condition D.2.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## SECTION D.3

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)];

- (c) A welding operation consisting of one (1) submerged arc station with a maximum hourly consumption of sixty (60) pounds of wire; twenty-two (22) metal inert gas stations with a maximum hourly consumption of fifty (50) pounds of wire per station; forty-eight (48) stick welding stations with a maximum hourly capacity of seventy-five (75), one ounce electrodes per station; and forty-eight oxy-methane flame-cutting stations with a maximum metal cutting rate of twenty (20) inches per minute.

### Insignificant Activities:

- (c) A sand storage silo constructed in 1985 with a maximum capacity of 55 tons of sand and a maximum throughput of 15,685 tons of sand per year with a filter bag as emission control.
- (d) Other emission units, not regulated by a NESHAP, with PM<sub>10</sub> and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:
- (1) One (1) dig-out operation, identified as DO-01, used to remove the solid material in the railcars, with a maximum process rate of 5,000 pounds of material per hour, exhausting through vent CV-02. [326 IAC 6-3-2]

(The information describing the process contained in this facility description box is descriptive and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.3.1 Particulate [326 IAC 6-3]

- (a) Particulate Emissions from the welding operations shall not exceed the pound per hour emission rate established as E in the following formula, for a process weight rate equal to or greater than 100 pounds per hour:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad \begin{array}{l} E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour} \end{array}$$

- (b) Pursuant to 326 IAC 6-3 (Process Operations), particulate emissions from the sand storage silo shall not exceed 3.0 pounds per hour when operating at a process weight rate of 1,250 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad \begin{array}{l} E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour} \end{array}$$

- (c) Pursuant to 326 IAC 6-3-2 (Manufacturing Processes), particulate emissions from the dig-out operation (DO-01) shall not exceed 7.58 pounds per hour when operating at a process weight rate of 5,000 pounds per hour. This emission limit is calculated using the equation in (a) above.

## SECTION D.4

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

#### Insignificant Activities:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour [326 IAC 6-2-4]:
- (1) Two (2) natural gas fired boilers, constructed after 1983, each with a maximum heat input capacity of 8.76 MMBtu/hr.
  - (2) One (1) natural gas fired boiler, identified as BO-01 and constructed in 2003, with a maximum heat input capacity of 7.0 MMBtu/hr, providing steam to cleaning operation and drying operation, and exhausting through stack BO-01.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.4.1 Particulate Matter (PM) [326 IAC 6-2-4]

- (a) Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from the two (2) 8.76 MMBtu per hour heat input boilers shall be limited to 0.62 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where: Pt = emission rate limit (lbs/MMBtu)  
Q = total source heat input capacity (MMBtu/hr)

- (b) Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from the boiler BO-01 shall be limited to 0.47 pounds per MMBtu heat input.

## SECTION D.5

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

- (d) One (1) railcar cleaning facility, constructed in 2003 and located at Plant 3, consisting of the following:
- (1) Two (2) degassing operations, identified as DG-01 and DG-02, used to remove the flammable commodities in the railcars, each with a maximum process rate of 2 railcars per day, controlled by a 15 MMBtu/hr natural gas-piloted flare (FL-01), and exhausting through stack FL-01.
  - (2) Four (4) general cleaning spots, identified as CL-01, CL-02, CL-03, and CL-04, with a total maximum process rate of 10 railcars per day, exhausting through vent CV-01. The emissions may be controlled by one of the following control devices:
    - (A) For VOC containing commodities, controlled by one (1) carbon adsorption system, identified as CC-01, exhausting through stack CC-01.
    - (B) For water soluble commodities, controlled by one (1) enclosed scrubbing system, identified as SC-01. The scrubbing water is directed to one (1) enclosed loop cleaning system, which consists of two (2) 4,000 gallon water tanks and is controlled by adsorption system CC-01.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.5.1 VOC Emissions [326 IAC 8-1-6] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 8-1-6 (BACT), the Permittee shall direct the exhausts from the railcars which have high VOC containing commodities (vapor pressure greater than 0.5 psi) to one of the following control devices.
- (1) Flare FL-01 for the degassing operations (DG-01 and DG-02), for the flammable VOC commodities, which have flashpoints less than 140°F.
  - (2) Carbon adsorption system CC-01 for the cleaning spots (CL-01, CL-02, CL-03, and CL-04), for the non-flammable VOC commodities with vapor pressure greater than 0.5 psi.
- (b) The railcar cleaning operations at the railcar cleaning facility shall be limited such that the total VOC emissions are to less than 13.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The monthly VOC emissions shall be determined by the following equation:

VOC Emissions

$$= \sum_n \{a \times \frac{P \times V \times MW}{R \times T} + b \times [CF \times S + RE] \times D\} \times (1 - Eff)$$

Where,

n = number of VOC containing railcars in cleaned each month in each category  
a = 1 for P equal or less than 14.7 psi (1 atm)  
0.05 for P greater than 14.7 psi  
P = vapor pressure of the commodity in each railcar shown on MSDS (psi)  
V = volume of each railcar (ft<sup>3</sup>) (1 gallon = 0.1337 ft<sup>3</sup>)  
MW = molecular weight of each commodity  
R = gas constant = 10.73 psi·ft<sup>3</sup>/lb-mole·°R  
T = the temperature for the vapor pressure specified on MSDS (°R)  
b = 0 for P equal or less than 14.7 psi  
1 for P greater than 14.7 psi  
CF = clingage factor = 0.000315 gallons/ft<sup>2</sup> from AP-42  
S = the inner surface area of the railcar (ft<sup>2</sup>)  
RE = residuals in the railcar = 5 gallons  
D = liquid density (lb/gal)  
Eff = control efficiency (%)

[note: This equation is provided by the source based on the automatic tracking system at this source.]

Combined with limits in the rest of the permit, these requirements ensure that VOC emissions from the entire source are limited to less than 250 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

#### D.5.2 HAP Emissions [326 IAC 2-4.1]

- (a) The Permittee shall direct the exhausts from the railcars which have HAP containing commodities to one of the following control devices.
- (1) Flare FL-01 for the degassing operations (DG-01 and DG-02), for the flammable commodities, which have flashpoints less than 140°F.
  - (2) Carbon adsorption system CC-01 for the cleaning spots (CL-01, CL-02, CL-03, and CL-04), for the non-flammable HAP commodities with vapor pressure greater than 0.5 psi.
  - (3) Scrubbing system SC-01 for the cleaning spots (CL-01, CL-02, CL-03, and CL-04), for the water soluble HAP commodities.
- (b) The railcar cleaning operations at the railcar cleaning facility shall be limited such that total HAP emissions are less than 10 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The monthly total HAP emissions shall be determined by the equation in Condition D.5.1(b).

The requirements above ensure that HAPs emissions from the this railcar cleaning facility is less than 10 tons/yr for a single HAP and less than 25 tons/yr for any combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 (MACT) are not applicable.

#### D.5.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

### **Compliance Determination Requirements**

#### **D.5.4 VOC and HAPs Emissions**



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In order to demonstrate compliance with Condition D.5.1(a) and D.5.2(a), for each railcar serviced, the Permittee shall keep the material safety data sheets (MSDS) for each commodity, and identify where each railcar was cleaned and how emissions from the cleaning operation were controlled.

#### **D.5.5 VOC and HAPs Emission Control**

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In order to comply with Conditions D.5.1(a) and D.5.3(a), the Permittee shall install, calibrate, maintain, and operate a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.

### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

#### **D.5.6 Visible Emissions Notations**

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- (a) Visible emission notations of stack exhaust from flare FL-01 shall be performed once per shift during normal daylight operations when this unit is in operation. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### **D.5.7 Flare Pilot Flame**

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In order to comply with Condition D.5.5, the Permittee shall monitor the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame when the degassing operations (DG-01 and DG-02) are in operation.

#### **D.5.8 Carbon Adsorption System**

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The Permittee shall monitor the VOC breakthrough indicator of the carbon adsorption system (CC-01), at least once per shift when the carbon adsorption system is in operation. The Permittee shall replace the spent carbon canister as indicated.

#### **D.5.9 Carbon Adsorption System Inspections**

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An inspection shall be performed each calendar quarter for the carbon adsorption system (CC-01) controlling the general cleaning spots (CL-01, CL-02, CL-03 and CL-04). Inspections required by this condition shall not be performed in consecutive months. Inspections are optional when venting to the indoors.

#### **D.5.10 Failure Detection**

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In the event that the carbon adsorption system malfunction has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B -

Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports shall be considered a violation of this permit.

#### **D.5.11 Scrubbing System Monitoring**

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The Permittee shall record the pH level of the scrubbing system (SC-01) at least once per shift when the scrubbing system is in operation. When for any one reading, the pH level is outside the normal range of pH value of 4.0 to 10.0, or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pH value reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The pH level shall be determined with the use of disposable pH paper.

[Note: This scrubbing system is not a typical scrubber and consists of the wash tanks and the orbital wash system, which sprays water droplets throughout the inside of the railcars. Therefore, there is no corresponding pressure drop or flow rate monitoring requirements with this scrubbing system.]

### **Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### **D.5.12 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.5.1(a), D.5.2(a), and D.5.4, the Permittee shall maintain records of the following for each railcar serviced:
  - (1) The material safety data sheets (MSDS) for each commodity.
  - (2) The cleaning operations of each railcar processed and how emissions were controlled in these cleaning operations.
- (b) To document compliance with Conditions D.5.1(b) and D.5.2(b), the Permittee shall maintain records in accordance with (1) through (8) below. Records maintained for (1) through (8) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC and HAP emission limits established in conditions D.5.1(b) and D.5.2(b).
  - (1) The commodity of each railcar cleaned.
  - (2) The vapor pressure of each commodity.
  - (3) The volume of each railcar cleaned.
  - (4) The molecular weight of each commodity.
  - (5) The inner surface area of the railcar, for commodities with a vapor pressure greater than 14.7 psi.
  - (6) The density of the commodity, for commodities with a vapor pressure greater than 14.7 psi.
  - (7) The total VOC and HAP emissions for each month.
  - (8) The total VOC and HAP emissions for each compliance period.

- (c) To document compliance with Condition 5.6, the Permittee shall maintain the once per shift records of visible emission notation of the exhaust from flare FL-01, when flare FL-01 is in operation.
- (d) To document compliance with Condition 5.8, the Permittee shall maintain the once per shift records of VOC breakthrough monitor for carbon adsorption system CC-01 and the records of the spent carbon canister replacement when the carbon adsorption system is in operation.
- (e) To document compliance with Condition 5.9, the Permittee shall maintain records of the results of the inspections required under Condition D.5.9.
- (f) To document compliance with Condition 5.11, the Permittee shall maintain the once per shift records of pH level for scrubbing system SC-01 when the scrubbing system is in operation.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.5.13 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.5.1(b) and D.5.2(b) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: Rescar Industries  
Source Address: 1723 West Walnut Street, Washington, Indiana 47501  
Mailing Address: 1723 West Walnut Street, Washington, Indiana 47501  
Part 70 Permit No.: T027-7723-00006  
Facility: Paint Facility  
Parameter: VOC Usage  
Limit: Input VOC usage less than 236 tons per 12 consecutive month period with compliance determined at the end of each month.

YEAR: \_\_\_\_\_

Month	VOC Usage (tons)	VOC Emissions (tons)	VOC Emissions (tons)
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Source Modification Quarterly Report**

Source Name: Rescar Industries  
Source Address: 1723 West Walnut Street, Washington, Indiana 47501  
Mailing Address: 1723 West Walnut Street, Washington, Indiana 47501  
Source Modification No.: 027-16864-00006  
Facility: Railcar Cleaning Facility  
Parameter: VOC Emissions  
Limit: Less than 13 tons per twelve (12) month period with compliance determined at the end of each month. VOC emissions are determined using the equation in Condition D.5.1(b).

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Source Modification Quarterly Report**

Source Name: Rescar Industries  
Source Address: 1723 West Walnut Street, Washington, Indiana 47501  
Mailing Address: 1723 West Walnut Street, Washington, Indiana 47501  
Source Modification No.: 027-16864-00006  
Facility: Railcar Cleaning Facility  
Parameter: Total HAP Emissions  
Limit: Less than 10 tons per twelve (12) month period with compliance determined at the end of each month. HAP emissions are determined using the equation in Condition D.5.1(b).

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a Part 70 Significant Source Modification and a Part 70 Significant Permit Modification

#### Source Background and Description

Source Name:	Rescar Industries, Inc.
Source Location:	1723 West Walnut Street, Washington, Indiana 47501
County:	Daviess
SIC Code:	4789
Operation Permit No.:	T027-7723-00006
Operation Permit Issuance Date:	August 20, 2001
Significant Source Modification No.:	027-16864-00006
Significant Permit Modification No.:	027-17130-00006
Permit Reviewer:	ERG/YC

The Office of Air Quality (OAQ) has reviewed a modification application from Rescar Industries, Inc., relating to the construction and operation of the following emission units and pollution control devices:

- (d) One (1) railcar cleaning facility, constructed in 2003 and located at Plant 3, consisting of the following:
  - (1) Two (2) degassing operations, identified as DG-01 and DG-02, used to remove the flammable commodities in the railcars, each with a maximum process rate of 2 railcars per day, controlled by a 15 MMBtu/hr natural gas-piloted flare (FL-01), and exhausting through stack FL-01.
  - (2) Four (4) general cleaning spots, identified as CL-01, CL-02, CL-03, and CL-04, with a total maximum process rate of 10 railcars per day, exhausting through vent CV-01. The emissions may be controlled by one of the following control devices:
    - (A) For VOC containing commodities, controlled by one (1) carbon adsorption system, identified as CC-01, exhausting through stack CC-01.
    - (B) For water soluble commodities, controlled by one (1) enclosed scrubbing system, identified as SC-01. The scrubbing water is directed to one (1) enclosed loop cleaning system, which consists of two (2) 4,000 gallon water tanks and is controlled by adsorption system CC-01.
  - \*(3) One (1) dig-out operation, identified as DO-01, used to remove the solid material in the railcars, with a maximum process rate of 5,000 pounds of material per hour, exhausting through vent CV-02.

- \*(4) One (1) natural gas fired boiler, identified as BO-01, with a maximum heat input capacity of 7.0 MMBtu/hr, providing steam to cleaning operation and drying operation, and exhausting through stack BO-01.

\*Note: These units are insignificant activities as defined in 326 IAC 2-7-1(21).

## History

On February 28, 2003, Rescar Industries, Inc. submitted an application to the OAQ requesting to add a railcar cleaning facility (Plant 3) to their existing source. Rescar Industries, Inc. is an existing railcar manufacturing and maintenance facility. Their Part 70 permit (T027-7723-00006) was issued on August 20, 2001.

## Source Definition

This source consists of three (3) plants:

- (a) Plant 1, the abrasive blasting building, is located at 1723 West Walnut Street, Washington, Indiana;
- (b) Plant 2, the paint and stencil building, is located at 1723 West Walnut Street, Washington, Indiana; and
- (c) Plant 3, the proposed railcar cleaning facility, is located at 1723 West Walnut Street, Washington, Indiana.

Since the three (3) plants are located on contiguous properties, belong to the same industrial grouping, and under common control of the same entity, IDEM, OAQ has determined that these three (3) plants will be considered one (1) source.

## Enforcement Issue

There are no enforcement actions pending.

## Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
FL-01	Flare	25	NA	NA	NA
CC-01	Carbon Adsorber	20	0.17	Unknown	Ambient
BO-01	Boiler	25	0.33	Unknown	Ambient

## Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification and the Part 70 Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on February 28, 2003. Additional information was received on April 23, 2003, June 2, 2003, June 4, 2003, and June 11, 2003.



## Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 4).

## Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	2.53
PM-10	2.39
SO <sub>2</sub>	0.73
*VOC	623
*CO	26.9
NO <sub>x</sub>	7.54

HAP's	Potential To Emit (tons/year)
*A single HAP	Greater than 10
TOTAL	Greater than 25

\*Note: The railcars cleaned at this site could contain any of the Federal HAPs.

## Justification for Modification

This modification is being performed through a Part 70 Significant Source Modification pursuant to 326 IAC 2-7-10.5(f)(4) as the potential to emit VOC is greater than 25 tons/yr, and pursuant to 326 IAC 2-7-10.5(f)(6) as the potential to emit HAPs is greater than 10 tons/yr for a single HAP and greater than 25 tons/yr for any combination of HAPs. The permit modification is being performed through a Part 70 Significant Permit Modification pursuant to 326 IAC 2-7-12(d) because this modification involves significant changes to existing monitoring, reporting, and record keeping requirements in the Title V permit.

## County Attainment Status

The source is located in Daviess County.

Pollutant	Status
PM-10	Attainment
SO <sub>2</sub>	Attainment
NO <sub>x</sub>	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone

standards. Daviess County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD) and 326 IAC 2-2.

- (b) Daviess County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD) and 326 IAC 2-2.
- (c) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	90.3
PM-10	90.3
SO <sub>2</sub>	5.00
VOC	Less than 250
CO	5.00
NO <sub>x</sub>	5.00

- (a) This existing source is a minor stationary source because none of the attainment regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or more, and it is not in one (1) of the twenty-eight (28) listed source categories.
- (b) These emissions are based on the Technical Support Document (TSD) for the source's Title V permit (T027-7723-0006), issued on August 20, 2001.

### Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
2 Degassing Operations	2.02	2.02	0.71	Less than 13.0	24.31	4.47	Less than 10 for total HAPs
4 General Cleaning Operations	-	-	-		-	-	

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
1 Dig-out Operation (Insignificant)	0.28	0.14	-	-	-	-	-
Boiler B01 (Insignificant)	0.23	0.23	0.02	0.17	2.58	3.07	Negligible
Total PTE of this Modification	2.53	2.39	0.73	13.2	26.9	7.54	Less than 10 for total HAPs
* The PTE of the Existing Source	90.3	90.3	5.00	Less than 250	5.00	5.00	61.2 for total HAPs
The total PTE of the Entire Source After this Modification	92.8	92.8	5.73	**Less than 250	31.9	12.5	Less than 71.2 for total HAPs
PSD Significant Thresholds	250	250	250	250	250	250	NA

Note: (\*)The PTE of the existing units are from the Technical Support Document (TSD) for the source's Title V permit (#027-7223-00006), issued on August 20, 2001.

(\*\*)The source proposed to limit the VOC emissions from the entire source to less than 250 tons/yr after this modification.

This modification to an existing minor stationary source is not major because the existing source is a PSD minor source and the potential to emit of each criteria pollutant from the proposed cleaning facility is less than the PSD significant thresholds of 250 tons/yr. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

The source proposed to limit the VOC emissions from the entire source to less than 250 tons/yr after this modification. Therefore, the source will still maintain the PSD minor source status.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) The wash water and process water tanks have capacities less than 40 cubic meters (10,560 gallons) and the VOC content in the waste water is negligible. Therefore, the New Source Performance Standards for Volatile Organic Liquid Storage Vessels for which construction, reconstruction, or modification commenced after July 23, 1984 (40 CFR 60.110b - 117b, Subpart Kb) are not applicable to these tanks.
- (c) Boiler BO-01 has a maximum heat input less than 10 MMBtu/hr. Therefore, the New Source Performance Standards for Small Industrial - Commercial - Institutional Steam generating Units (40 CFR 60.40c-48c, Subpart Dc) are not applicable.
- (d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.
- (e) This Part 70 Permit does involve pollutant-specific emissions units (Degassing Operations and Cleaning Operations) as defined in 40 CFR 64.1 for VOC and HAPs:

- (1) with the potential to emit before controls equal to or greater than the major source threshold for VOC and HAPs;
- (2) that is subject to an emission limitation or standard for VOC and HAPs; and
- (3) uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard.

Therefore, the proposed degassing and cleaning operations are subject to the requirements of 40 CFR 64 (Compliance Assurance Monitoring). However, since the VOC and HAP emissions after control from these units are less than the Title V major source thresholds, the compliance assurance monitoring requirements will be addressed in the source's first Part 70 renewal permit.

### State Rule Applicability - Entire Source

#### 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source was constructed in 1986 and modified in 1991 and 2003 (this modification). This source is not in 1 of the 28 source categories defined in 326 IAC 2-2-1(p)(1). The potential to emit PM, PM10, VOC before control was greater than two hundred and fifty (250) tons per year. The PM, PM10 and VOC emissions for the entire source were limited to less than 250 tons/yr in the source's Title V permit (T027-7723-00006, issued on August 20, 2001).

The potential to emit VOC from this modification is greater than 250 tons/yr before control. In order to be a PSD minor modification, the source has proposed the following limitations:

- (a) The Permittee shall direct the exhausts from the railcars which have high VOC containing commodities (vapor pressure greater than 0.5 psi) to one of the following control devices.
  - (1) Flare FL-01 for the degassing operations (DG-01 and DG-02), for the flammable VOC commodities, which have flashpoints less than 140°F.
  - (2) Carbon adsorption system CC-01 for the cleaning spots (CL-01, CL-02, CL-03, and CL-04), for the non-flammable VOC commodities with vapor pressure greater than 0.5 psi.
- (b) The railcar cleaning operations at the railcar cleaning facility shall be limited such that the total VOC emissions are to less than 13.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The monthly VOC emissions shall be determined by the following equation:

VOC Emissions

$$= \sum_n \left\{ a \times \frac{P \times V \times MW}{R \times T} + b \times [CF \times S + RE] \times D \right\} \times (1 - Eff)$$

Where,

- n = number of VOC containing railcars in cleaned each month in each category  
a = 1 for P equal or less than 14.7 psi (1 atm)  
0.05 for P greater than 14.7 psi

P = vapor pressure of the commodity in each railcar shown on MSDS (psi)  
V = volume of each railcar (ft<sup>3</sup>) (1 gallon = 0.1337 ft<sup>3</sup>)  
MW = molecular weight of each commodity  
R = gas constant = 10.73 psi·ft<sup>3</sup>/lb-mole·°R  
T = the temperature for the vapor pressure specified on MSDS (°R)  
b = 0 for P equal or less than 14.7 psi  
1 for P greater than 14.7 psi  
CF = clingage factor = 0.000315 gallons/ft<sup>2</sup> from AP-42  
S = the inner surface area of the railcar (ft<sup>2</sup>)  
RE = residuals in the railcar = 5 gallons  
D = liquid density (lb/gal)  
Eff = control efficiency (%)

[note: This equation is provided by the source based on the automatic tracking system at this source.]

In addition, this source would like to limit the VOC emissions from the entire source to less than 250 tons/yr in order to maintain the PSD minor source status. Therefore, the VOC usage limit from the existing paint facility will be adjusted from less than 249 tons/yr to less than 236 tons/yr. Combined with the VOC emissions from the proposed railcar cleaning facility, the VOC emissions from the entire source are limited to less than 250 tons/yr. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable. The source will still maintain the PSD minor source status after this modification.

#### 326 IAC 2-4.1 (New Sources of Hazardous Air Pollutants)

This source was constructed in 1986 and modified in 1991 and 2003 (this modification). This modification will be constructed after July 27, 1997, and the potential to emit HAPs before control from this modification is greater than 10 tons/yr for a single HAP and greater than 25 tons/yr for any combination of HAPs. The source has proposed the following emission limitations:

- (a) The Permittee shall direct the exhausts from the railcars which have high VOC containing commodities (vapor pressure greater than 0.5 psi) to one of the following control devices.
  - (1) Flare FL-01 for the degassing operations (DG-01 and DG-02), for the flammable VOC commodities, which have flashpoints less than 140°F.
  - (2) Carbon adsorption system CC-01 for the cleaning spots (CL-01, CL-02, CL-03, and CL-04), for the non-flammable VOC commodities with vapor pressure greater than 0.5 psi.
- (b) The railcar cleaning operations at the railcar cleaning facility shall be limited such that the total HAP emissions are to less than 10.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The monthly HAP emissions shall be determined by the following equation:

HAP Emissions

$$= \sum_n \left\{ a \times \frac{P \times V \times MW}{R \times T} + b \times [CF \times S + RE] \times D \right\} \times (1 - \text{Eff})$$

Where,

n = number of HAP containing railcars in cleaned each month in each category  
a = 1 for P equal or less than 14.7 psi (1 atm)  
0.05 for P greater than 14.7 psi  
P = vapor pressure of the commodity in each railcar shown on MSDS (psi)  
V = volume of each railcar (ft<sup>3</sup>) (1 gallon = 0.1337 ft<sup>3</sup>)  
MW = molecular weight of each commodity  
R = gas constant = 10.73 psi·ft<sup>3</sup>/lb-mole·°R  
T = the temperature for the vapor pressure specified on MSDS (°R)  
b = 0 for P equal or less than 14.7 psi  
1 for P greater than 14.7 psi  
CF = clingage factor = 0.000315 gallons/ft<sup>2</sup> from AP-42  
S = the inner surface area of the railcar (ft<sup>2</sup>)  
RE = residuals in the railcar = 5 gallons  
D = liquid density (lb/gal)  
Eff = control efficiency (%)

[note: This equation is provided by the source based on the automatic tracking system at this source.]

Therefore, the requirements of 326 IAC 2-4.1 (MACT) are not applicable to this modification.

#### 326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit VOC more than one hundred (100) tons per year. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

#### 326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity for sources located in Lake County shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### **State Rule Applicability - Degassing Operations (DG-01 and DG-02) and General Cleaning Spots (CL-01, CL-02, CL-03, and CL-04)**

#### 326 IAC 8-1-6 (New Facilities - General Reduction Requirement)

The total VOC emissions from the proposed railcar cleaning facility are greater than 25 tons/yr. Therefore, the proposed railcar cleaning process at this source is subject to 326 IAC 8-1-6, and the Best Available Control Technology (BACT) is required for the this process. IDEM, OAQ has agreed that the following control operations are the BACT for the railcar cleaning process:

- (a) Flare FL-01 for the degassing operations (DG-01 and DG-02), for the flammable VOC commodities, which have flashpoints less than 140°F.

- (b) Carbon adsorption system CC-01 for the cleaning spots (CL-01, CL-02, CL-03, and CL-04), for the non-flammable VOC commodities with vapor pressure greater than 0.5 psi.

With the control devices above, the VOC emissions from the entire railcar cleaning facility will be limited to less than 25 tons/yr.

326 IAC 9-1-2 (Carbon Monoxide Emission Requirements)

This source is not among the listed source categories in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1-2 are not applicable to flare FL-01.

326 IAC 10-1-3 (Nitrogen Oxide Emission Requirements)

This source is not located in Clark or Floyd County. Therefore, the requirements of 326 IAC 10-1-3 are not applicable to flare FL-01.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

The proposed water tanks contain negligible VOC and this source is not located in Clark, Floyd, Lake, or Porter County. Therefore, the requirements of 326 IAC 8-9-1 are not applicable to these tanks.

### State Rule Applicability - Insignificant Activities

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The allowable particulate emissions from the dig-out operation (DO-01) shall be limited to 7.58 lbs/hr when the process weight rate is 5,000 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

According to the emission calculations (see Appendix A), the potential to emit PM from the dig-out operation (DO-01) is less than the particulate limit above. Therefore, the dig-out operation is in compliance with 326 IAC 6-3-2.

326 IAC 6-2-4 (PM Emissions for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-4(a), indirect heating facilities constructed after September 12, 1983, shall be limited by the following equation:

$$P_t = \frac{1.09}{Q^{0.26}}$$

Where

$$P_t = \text{emission rate limit (lbs/MMBtu)} \\ Q = \text{total source heat input capacity (MMBtu/hr)}$$

The proposed boiler BO-01 has a maximum heat input capacity of 7.0 MMBtu/hr and there are two existing 8.76 MMBtu/hr boilers. The emission rate limit calculated from the equation above equals:

$$P_t = \frac{1.09}{7.0^{0.26}} = 0.47 \text{ lbs/MMBtu}$$

$$(2 \times 8.76 + 7.0)^{0.26}$$

Therefore, the PM emission limit for boiler BO-01 is 0.47 lbs/MMBtu.

## Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. The degassing operations (DG-01 and DG-02) have applicable compliance monitoring conditions as specified below:
  - (a) Visible emissions notations of the stack exhaust of flare FL-01 shall be performed once per shift during normal daylight operations when flare FL-01 is in operation. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.
  - (b) The presence of a flare flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

These monitoring conditions are necessary because flare FL-01 must operate properly at all times the degassing operations (DG-01 and DG-02) are in operation to ensure compliance with 326 IAC 2-2 (PSD), 326 IAC 2-4.1 (MACT), and 326 IAC 8-1-6 (BACT).

2. The general cleaning spots (CL-01, CL-02, CL-03, and CL-04) have applicable compliance monitoring conditions as specified below:
  - (a) The Permittee shall monitor the VOC breakthrough indicator of the carbon adsorption system (CC-01), at least once per shift when the carbon adsorption



system is in operation. The Permittee shall replace the spent carbon canister as indicated.

- (b) An inspection shall be performed each calendar quarter for the carbon adsorption system (CC-01) controlling the general cleaning spots (CL-01, CL-02, CL-03 and CL-04). Inspections required by this condition shall not be performed in consecutive months. Inspections are optional when venting to the indoors. In the event that the carbon adsorption system malfunction has been observed, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (c) The Permittee shall monitor and record the pH level of the scrubbing system SC-01, at least once per shift when the scrubbing system is in operation. When for any one reading, the pH level is outside the normal pH level range of 4.0 and 10.0, or a pH level established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Implementation, Preparation, Records, and Reports.

[Note: This scrubbing system is not a typical scrubber and consists of the wash tanks and the orbital wash system, which sprays water droplets throughout the inside of the railcars. Therefore, there is no corresponding pressure drop or flow rate monitoring requirements with this scrubbing system.]

These monitoring conditions are necessary because carbon adsorption system CC-01 and scrubbing system SC-01 must operate properly at all times the general cleaning spots (CL-01, CL-02, CL-03, and CL-04) are in operation to ensure compliance with 326 IAC 2-2 (PSD), 326 IAC 2-4.1 (MACT), and 326 IAC 8-1-6 (BACT).

## Proposed Changes

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary railcar manufacturing and maintenance facility.

Responsible Official:	David Hirschey, Director, Safety & Environmental
Source Address:	1723 West Walnut Street, Washington, IN Indiana 47501
Mailing Address:	1723 West Walnut Street, Washington, IN Indiana 47501
General Source Phone Number:	(812) 254-1121
SIC Code:	4789
County Location:	Daviess
Source Location County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act <b>Not 1 of 28 Source Categories</b>

### A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This railcar manufacturing and maintenance company consists of ~~two (2)~~ **three (3)** plants:

- (a) Plant 1, the abrasive blasting building, is located at 1723 West Walnut Street, Washington, ~~IN~~Indiana; and
- (b) Plant 2, the paint and stencil building, is located at 1723 West Walnut Street, Washington, ~~IN~~Indiana.

- (c) Plant 3, the railcar cleaning building, is located at 1723 West Walnut Street, Washington, Indiana.**

Since the ~~two (2)~~ **three (3)** plants are located on contiguous properties, belong to the same industrial grouping, and under common control of the same entity, they will be considered one (1) source, effective from the date of issuance of this Part 70 permit. In this case, the word plant refers to separate buildings located at the same address.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]  
[326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

- (d) One (1) railcar cleaning facility, constructed in 2003 and located at Plant 3, consisting of the following:**
- (1) Two (2) degassing operations, identified as DG-01 and DG-02, used to remove the flammable commodities in the railcars, each with a maximum process rate of 2 railcars per day, controlled by a 15 MMBtu/hr natural gas-piloted flare (FL-01), and exhausting through stack FL-01.**
  - (2) Four (4) general cleaning spots, identified as CL-01, CL-02, CL-03, and CL-04, with a total maximum process rate of 10 railcars per day, exhausting through vent CV-01. The emissions may be controlled by one of the following control devices:**
    - (A) For VOC containing commodities, controlled by one (1) carbon adsorption system, identified as CC-01, exhausting through stack CC-01.**
    - (B) For water soluble commodities, controlled by one (1) enclosed scrubbing system, identified as SC-01. The scrubbing water is directed to one (1) enclosed loop cleaning system, which consists of two (2) 4,000 gallon water tanks and is controlled by adsorption system CC-01.**

A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]  
[326 IAC 2-7-5(15)]

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This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour; [326 IAC 6-2-34]:-**
- (1) Two (2) natural gas fired boilers, constructed after 1983, each with a maximum heat input capacity of 8.76 MMBtu/hr.**
  - (2) One (1) natural gas fired boiler, identified as BO-01 and constructed in 2003, with a maximum heat input capacity of 7.0 MMBtu/hr, providing steam to cleaning operation and drying operation, and exhausting through stack BO-01.**

.....

- (d) Other emission units, not regulated by a NESHAP, with PM<sub>10</sub> and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:
- (1) One (1) dig-out operation, identified as DO-01, used to remove the solid material in the railcars, with a maximum process rate of 5,000 pounds of material per hour, exhausting through vent CV-02. [326 IAC 6-3-2]

D.2.1 Volatile Organic Compounds (VOC) Limitations

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Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or products may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of **a daily volume - weighted average of** 3.5 pounds of VOC per gallon of coating excluding water or 4.3 pounds of VOC per gallon of clear coating excluding water, as delivered to the applicator for any calendar day for air dried or forced warm air (less than 90EC or 194 EF) dried coatings.

D.2.2 PSD Minor Limit [326 IAC 2-2] ~~[40 CFR 52.21]~~

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This facility shall use less than ~~249~~ **236** tons of VOC, including coatings, dilution solvents, and cleaning solvents, per **twelve (12)** consecutive month period **with compliance determined at the end of each month**. This usage, **when combined with Condition D 5.2**, limit is required to limit the potential to emit of VOC to less than 249 tons per 12 consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) ~~and 40 CFR 52.21~~ not applicable.

SECTION D.3

FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-7-5(15)];**

- (ac) A welding operation consisting of one (1) submerged arc station with a maximum hourly consumption of sixty (60) pounds of wire; twenty-two (22) metal inert gas stations with a maximum hourly consumption of fifty (50) pounds of wire per station; forty-eight (48) stick welding stations with a maximum hourly capacity of seventy-five (75), one ounce electrodes per station; and forty-eight oxymethane flame-cutting stations with a maximum metal cutting rate of twenty (20) inches per minute; and

**Insignificant Activities:**

- (bc) A sand storage silo constructed in 1985 with a maximum capacity of 55 tons of sand and a maximum throughput of 15,685 tons of sand per year with a filter bag as emission control.
- (d) **Other emission units, not regulated by a NESHAP, with PM<sub>10</sub> and SO<sub>2</sub> emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:**
- (1) **One (1) dig-out operation, identified as DO-01, used to remove the solid material in the railcars, with a maximum process rate of 5,000 pounds of material per hour, exhausting through vent CV-02. [326 IAC 6-3-2]**

(The information describing the process contained in this facility description box is descriptive and does not constitute enforceable conditions.)

**D.3.1 Particulate Matter (PM) [326 IAC 6-3]**

- (a) ~~The PM Particulate Emissions~~ from the welding operations shall not exceed the pound per hour emission rate established as E in the following formula, for a process weight rate equal to or greater than 100 pounds per hour:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad \begin{array}{l} E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour} \end{array}$$

- (b) Pursuant to 326 IAC 6-3 (Process Operations), ~~the allowable PM particulate emissions rate~~ from the sand storage silo shall not exceed 3.0 pounds per hour when operating at a process weight rate of 1,250 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

$$E = 4.10 P^{0.67} \quad \text{where} \quad \begin{array}{l} E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour} \end{array}$$

- (c) Pursuant to 326 IAC 6-3-2 (Manufacturing Processes), particulate emissions from the dig-out operation (DO-01) shall not exceed 7.58 pounds per hour when operating at a process weight rate of 5,000 pounds per hour. This emission limit is calculated using the equation in (a) above.

## SECTION D.4

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

#### Insignificant Activities:

~~Two (2) Natural Gas-fired Boilers less than 10 MMBtu/hr each.~~

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour; [326 IAC 6-2-34]:-

(1) **Two (2) natural gas fired boilers, constructed after 1983, each with a maximum heat input capacity of 8.76 MMBtu/hr.**

(2) **One (1) natural gas fired boiler, identified as BO-01 and constructed in 2003, with a maximum heat input capacity of 7.0 MMBtu/hr, providing steam to cleaning operation and drying operation, and exhausting through stack BO-01.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.4.1 Particulate Matter (PM) [326 IAC 6-2-4]

- (a) Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from the two (2) **8.76 less than (10)** MMBtu per hour heat input boilers shall be limited to 0.62 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$P_t = \frac{1.09}{Q^{0.26}}$$

**where:**

Pt = emission rate limit (lbs/MMBtu)

Q = total source heat input capacity (MMBtu/hr)

- (b) Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from the boiler BO-01 shall be limited to **0.47 pounds per MMBtu heat input.**

## SECTION D.5 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]:

- (d) One (1) railcar cleaning facility, constructed in 2003 and located at Plant 3, consisting of the following:
- (1) Two (2) degassing operations, identified as DG-01 and DG-02, used to remove the flammable commodities in the railcars, each with a maximum process rate of 2 railcars per day, controlled by a 15 MMBtu/hr natural gas-piloted flare (FL-01), and exhausting through stack FL-01.
  - (2) Four (4) general cleaning spots, identified as CL-01, CL-02, CL-03, and CL-04, with a total maximum process rate of 10 railcars per day, exhausting through vent CV-01. The emissions may be controlled by one of the following control devices:
    - (A) For VOC containing commodities, controlled by one (1) carbon adsorption system, identified as CC-01, exhausting through stack CC-01.
    - (B) For water soluble commodities, controlled by one (1) enclosed scrubbing system, identified as SC-01. The scrubbing water is directed to one (1) enclosed loop cleaning system, which consists of two (2) 4,000 gallon water tanks and is controlled by adsorption system CC-01.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.5.1 VOC Emissions [326 IAC 8-1-6] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 8-1-6 (BACT), the Permittee shall direct the exhausts from the railcars which have high VOC containing commodities (vapor pressure greater than 0.5 psi) to one of the following control devices.
- (1) Flare FL-01 for the degassing operations (DG-01 and DG-02), for the flammable VOC commodities, which have flashpoints less than 140EF.
  - (2) Carbon adsorption system CC-01 for the cleaning spots (CL-01, CL-02, CL-03, and CL-04), for the non-flammable VOC commodities with vapor pressure greater than 0.5 psi.
- (b) The railcar cleaning operations at the railcar cleaning facility shall be limited such that the total VOC emissions are less than 13.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The monthly VOC emissions shall be determined by the following equation:

#### VOC Emissions

$$= \sum_n \left\{ a \times \frac{P \times V \times MW}{R \times T} + b \times [CF \times S + RE] \times D \right\} \times (1 - Eff)$$

Where,

- n =** number of VOC containing railcars in cleaned each month in each category  
**a =** 1 for P equal or less than 14.7 psi (1 atm)  
0.05 for P greater than 14.7 psi  
**P =** vapor pressure of the commodity in each railcar shown on MSDS (psi)  
**V =** volume of each railcar (ft<sup>3</sup>) (1 gallon = 0.1337 ft<sup>3</sup>)  
**MW =** molecular weight of each commodity  
**R =** gas constant = 10.73 psi ft<sup>3</sup>/lb-mole-°R  
**T =** the temperature for the vapor pressure specified on MSDS (°R)  
**b =** 0 for P equal or less than 14.7 psi  
1 for P greater than 14.7 psi  
**CF =** clingage factor = 0.000315 gallons/ft<sup>2</sup> from AP-42  
**S =** the inner surface area of the railcar (ft<sup>2</sup>)  
**RE =** residuals in the railcar = 5 gallons  
**D =** liquid density (lb/gal)  
**Eff =** control efficiency (%)

[note: This equation is provided by the source based on the automatic tracking system at this source.]

Combined with limits in the rest of the permit, these requirements ensure that VOC emissions from the entire source are limited to less than 250 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

#### **D.5.2 HAP Emissions [326 IAC 2-4.1]**

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- (a) The Permittee shall direct the exhausts from the railcars which have HAP containing commodities to one of the following control devices.
- (1) Flare FL-01 for the degassing operations (DG-01 and DG-02), for the flammable commodities, which have flashpoints less than 140°F.
  - (2) Carbon adsorption system CC-01 for the cleaning spots (CL-01, CL-02, CL-03, and CL-04), for the non-flammable HAP commodities with vapor pressure greater than 0.5 psi.
  - (3) Scrubbing system SC-01 for the cleaning spots (CL-01, CL-02, CL-03, and CL-04), for the water soluble HAP commodities.
- (b) The railcar cleaning operations at the railcar cleaning facility shall be limited such that total HAP emissions are less than 10 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The monthly total HAP emissions shall be determined by the equation in Condition D.5.1(b).

The requirements above ensure that HAPs emissions from the this railcar cleaning facility is less than 10 tons/yr for a single HAP and less than 25 tons/yr for any combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 (MACT) are not applicable.

#### **D.5.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

## **Compliance Determination Requirements**

### **D.5.4 VOC and HAPs Emissions**

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In order to demonstrate compliance with Condition D.5.1(a) and D.5.2(a), for each railcar serviced, the Permittee shall keep the material safety data sheets (MSDS) for each commodity, and identify where each railcar was cleaned and how emissions from the cleaning operation were controlled.

### **D.5.5 VOC and HAPs Emission Control**

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In order to comply with Conditions D.5.1(a) and D.5.3(a), the Permittee shall install, calibrate, maintain, and operate a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame.

## **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

### **D.5.6 Visible Emissions Notations**

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- (a) Visible emission notations of stack exhaust from flare FL-01 shall be performed once per shift during normal daylight operations when this unit is in operation. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

### **D.5.7 Flare Pilot Flame**

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In order to comply with Condition D.5.5, the Permittee shall monitor the presence of a flare pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame when the degassing operations (DG-01 and DG-02) are in operation.

### **D.5.8 Carbon Adsorption System**

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The Permittee shall monitor the VOC breakthrough indicator of the carbon adsorption system (CC-01), at least once per shift when the carbon adsorption system is in operation. The Permittee shall replace the spent carbon canister as indicated.

### **D.5.9 Carbon Adsorption System Inspections**

---

An inspection shall be performed each calendar quarter for the carbon adsorption system (CC-01) controlling the general cleaning spots (CL-01, CL-02, CL-03 and CL-04). Inspections required by this condition shall not be performed in consecutive months. Inspections are optional when venting to the indoors.



#### **D.5.10 Failure Detection**

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In the event that the carbon adsorption system malfunction has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports shall be considered a violation of this permit.

#### **D.5.11 Scrubbing System Monitoring**

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The Permittee shall record the pH level of the scrubbing system (SC-01) at least once per shift when the scrubbing system is in operation. When for any one reading, the pH level is outside the normal range of pH value of 4.0 to 10.0, or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pH value reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The pH level shall be determined with the use of disposable pH paper.

[Note: This scrubbing system is not a typical scrubber and consists of the wash tanks and the orbital wash system, which sprays water droplets throughout the inside of the railcars. Therefore, there is no corresponding pressure drop or flow rate monitoring requirements with this scrubbing system.]

**Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### **D.5.12 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.5.1(a), D.5.2(a), and D.5.4, the Permittee shall maintain records of the following for each railcar serviced:
- (1) The material safety data sheets (MSDS) for each commodity.
  - (2) The cleaning operations of each railcar processed and how emissions were controlled in these cleaning operations.
- (b) To document compliance with Conditions D.5.1(b) and D.5.2(b), the Permittee shall maintain records in accordance with (1) through (8) below. Records maintained for (1) through (8) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC and HAP emission limits established in conditions D.5.1(b) and D.5.2(b).
- (1) The commodity of each railcar cleaned.
  - (2) The vapor pressure of each commodity.
  - (3) The volume of each railcar cleaned.
  - (4) The molecular weight of each commodity.
  - (5) The inner surface area of the railcar, for commodities with a vapor pressure greater than 14.7 psi.

- (6) The density of the commodity, for commodities with a vapor pressure greater than 14.7 psi.
  - (7) The total VOC and HAP emissions for each month.
  - (8) The total VOC and HAP emissions for each compliance period.
- (c) To document compliance with Condition 5.6, the Permittee shall maintain the once per shift records of visible emission notation of the exhaust from flare FL-01, when flare FL-01 is in operation.
- (d) To document compliance with Condition 5.8, the Permittee shall maintain the once per shift records of VOC breakthrough monitor for carbon adsorption system CC-01 and the records of the spent carbon canister replacement when the carbon adsorption system is in operation.
- (e) To document compliance with Condition 5.9, the Permittee shall maintain records of the results of the inspections required under Condition D.5.9.
- (f) To document compliance with Condition 5.11, the Permittee shall maintain the once per shift records of pH level for scrubbing system SC-01 when the scrubbing system is in operation.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### **D.5.13 Reporting Requirements**

A quarterly summary of the information to document compliance with Conditions D.5.1(b) and D.5.2(b) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Rescar Industries

Source Address: 1723 West Walnut Street, Washington, ~~IN~~ **Indiana** 47501

Mailing Address: 1723 West Walnut Street, Washington, ~~IN~~ **Indiana** 47501

Part 70 Permit No.: T027-7723-00006

Facility: Paint Facility

Parameter: **VOC Usage**

Limit: Input VOC usage less than ~~250~~ **236** tons per 12 consecutive month period **with compliance determined at the end of each month.**

YEAR: \_\_\_\_\_

Month	VOC Usage (tons)	VOC Emissions (tons)	VOC Emissions (tons)
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Source Modification Quarterly Report**

**Source Name:** Rescar Industries  
**Source Address:** 1723 West Walnut Street, Washington, Indiana 47501  
**Mailing Address:** 1723 West Walnut Street, Washington, Indiana 47501  
**Source Modification No.:** 027-16864-00006  
**Facility:** Railcar Cleaning Facility  
**Parameter:** VOC Emissions  
**Limit:** Less than 13 tons per twelve (12) month period with compliance determined at the end of each month. VOC emissions are determined using the equation in Condition D.5.1(b).

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9      No deviation occurred in this quarter.

9      Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

**Submitted by:** \_\_\_\_\_  
**Title / Position:** \_\_\_\_\_  
**Signature:** \_\_\_\_\_  
**Date:** \_\_\_\_\_  
**Phone:** \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Source Modification Quarterly Report**

**Source Name:** Rescar Industries  
**Source Address:** 1723 West Walnut Street, Washington, Indiana 47501  
**Mailing Address:** 1723 West Walnut Street, Washington, Indiana 47501  
**Source Modification No.:** 027-16864-00006  
**Facility:** Railcar Cleaning Facility  
**Parameter:** Total HAP Emissions  
**Limit:** Less than 10 tons per twelve (12) month period with compliance determined at the end of each month. HAP emissions are determined using the equation in Condition D.5.1(b).

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9      No deviation occurred in this quarter.

9      Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

**Submitted by:** \_\_\_\_\_  
**Title / Position:** \_\_\_\_\_  
**Signature:** \_\_\_\_\_  
**Date:** \_\_\_\_\_  
**Phone:** \_\_\_\_\_

## **Conclusion**

The construction of this proposed modification shall be subject to the conditions of the proposed Part 70 Significant Source Modification No. 027-16864-00006. The operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification No. 027-17130-00006.

**Appendix A: Emission Calculations****VOC and HAP Emissions****From Two (2) Degassing Operations (DG-01 and DG-02) and Four (4) Cleaning Operations (CL1-CL4)****Company Name: Rescar Industries, Inc.****Address: 1723 West Walnut Street, Washington, IN 47501****SSM#: 027-16864-00006****Reviewer: ERG/YC****Date: April 24, 2003**

The railcars which contain VOC or HAP commodities could be processed in the degassing operations, which are controlled by a flare with 98% control efficiency, or be processed in the cleaning operations, which are controlled by a carbon adsorption system with 99.75% efficiency.

Worst case scenario: assume that all the VOC and HAP containing railcars are processed in the degassing operations only.

Railcar Commodity Example	Vapor Pressure at 75F (psi)	Molecular Weight (lbs/lb-mole)	Size of Railcar (gal/car)	Maximum Process Rate (car/day)	Potential VOC (lbs/car)	Potential to Emit VOC (tons/yr)	Flare Control Efficiency (%)	Potential to Emit VOC after Control (ton/yr)
**Methylene Chloride (HAP)	7.94	84.94	34,000	4.0	534.1	389.86	98%	7.80
1,1-Dichloroethylene (VOC)	11.17	96.50	34,000	4.0	853.6	623.10	98%	12.46
Gasoline (VOC)	6.80	66.00	34,000	4.0	355.4	259.44	98%	5.19
<b>*Total</b>						<b>623.10</b>		<b>12.46</b>

\* The total VOC emissions are the highest emissions among the different commodities.

\*\* The railcars processed at this site could contain any federal HAP. Methylene Chloride is the worst case scenario.

**METHODOLOGY**

Potential VOC (lbs/car) = VP (psi) x Size of Railcar (gal/car) x 0.1337 ft<sup>3</sup>/gal x Molecular Weight (lbs/lbs-mole) / Gas Constant (10.73 psi-ft<sup>3</sup>/lbs-mole-R) / Temp (75F+460)

Potential to Emit VOC (tons/yr) = Potential VOC (lbs/car) x Max. Process Rate (cars/day) x 365 days/yr x 1 ton/2000 lbs

Potential to Emit VOC after Control (tons/yr) = Potential to Emit VOC (tons/yr) x (1-Control Efficiency)

## Appendix A: Emission Calculations Natural Gas Combustion

### From Two (2) Degassing Operations (DG-01 and DG-02)

**Company Name: Rescar Industries, Inc.**  
**Address: 1723 West Walnut Street, Washington, IN 47501**  
**SSM#: 027-16864-00006**  
**Reviewer: ERG/YC**  
**Date: April 24, 2003**

\* The degassing operations are controlled by one (1) 15MMBtu/hr natural gas-fired flare.

Max. Heat Input                      Flow Rate  
MMBtu/hr                              scfm

15.0

695

		Pollutant			
Emission Factor	PM <sup>a</sup> 177.0 (ug/dsl)	PM10 <sup>a</sup> 177.0 (ug/dsl)	SO <sub>2</sub> <sup>c</sup> NA	NOx <sup>b</sup> 0.068 (lbs/MMBtu)	CO <sup>b</sup> 0.37 (lbs/MMBtu)
Potential Emission in tons/yr	2.02	2.02	0.71	4.47	24.31

<sup>a</sup> Emission Factors are from AP-42, Chapter 13.5 - Industrial Flares -Table 13.5-1 - Soot for average smoking flares (AP-42, 01/95).

Assuming PM10 emissions equal PM emissions.

<sup>b</sup> Emission Factors are from AP-42, Chapter 13.5 - Industrial Flares, Table 13.5-1 (AP-42, 01/95)

<sup>c</sup> Assuming all the SO<sub>2</sub> emissions are from the railcars containing sulfur acid and all the sulfur contained converts to SO<sub>2</sub> after flare combustion.

### Methodology

PM/PM10 Emissions (tons/yr) = Flow Rate (scfm) x 60 (min/hr) x 28.317 (l/scf) x Emission Factor (ug/dsl) x 1g/1000000 ug x 1 lbs/454 g x 8760 (hr/yr) x 1 ton/2000 lbs

SO<sub>2</sub> Emissions (tons/yr) = 0.193 psi x 34,000 gal/car x 0.1337 cf/gal x Mole weight of SO<sub>2</sub> (64 lbs/lbs mole) / Gas Constant (10.73 psi-cf/lb mole-R) / Temp (75F+ 460)  
x 4 cars/day x 365 cars/yr x 1 ton/2000 lbs

NOx/CO Emissions (tons/yr) = Max. Heat Input (MMBtu/hr) x Emission Factor (lbs/MMBtu) x 8760 hr/yr x 1 ton/2000 lbs



**Appendix A: Emission Calculations**  
**Natural Gas Combustion**  
**(MMBtu/hr < 100)**  
**From Boiler BO1 (Insignificant)**

**Company Name: Rescar Industries, Inc.**  
**Address: 1723 West Walnut Street, Washington, IN 47501**  
**SSM#: 027-16864-00006**  
**Reviewer: ERG/YC**  
**Date: April 24, 2003**

Heat Input Capacity  
MMBtu/hr

1.35

Potential Throughput  
MMCF/yr

11.8

	Pollutant					
	PM*	PM10*	SO <sub>2</sub>	**NO <sub>x</sub>	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100	5.5	84.0
<b>Potential Emission in tons/yr</b>	<b>0.04</b>	<b>0.04</b>	<b>3.5E-03</b>	<b>0.59</b>	<b>0.03</b>	<b>0.50</b>

\*PM and PM10 emission factors are condensable and filterable PM10 combined.

\*\*Emission Factors for NO<sub>x</sub>: Uncontrolled = 100, Low NO<sub>x</sub> Burner = 50, Low NO<sub>x</sub> Burners/Flue gas recirculation = 32

### Methodology

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (AP-42 Supplement D 3/98)

Potential Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

## Appendix A: Emission Calculations PM/PM10 Emissions

From the Dig-out Operation DO-01 (Insignificant)

**Company Name:** Rescar Industries, Inc.  
**Address:** 1723 West Walnut Street, Washington, IN 47501  
**SSM#:** 027-16864-00006  
**Reviewer:** ERG/YC  
**Date:** April 24, 2003

Max. Process Rate  
lbs/hr

500

(Provide by the source)

	Pollutant	
	PM	PM10
*Emission Factor (lbs/ton)	0.026	0.013
<b>Potential to Emit in lbs/hr</b>	<b>0.0065</b>	<b>0.00325</b>
<b>Potential to Emit in tons/yr</b>	<b>0.03</b>	<b>0.01</b>

\* There are no emission factors available for railcar dig-out operation. The emission factors used here are from AP-42, Chapter 12.5, Table 12.5-4 for batch drop operation of high silt slag at iron and steel mills(10/86).

### Methodology

PTE of PM/PM10 (lbs/hr) = Max. Process Rate (lbs/hr) x 1 ton/2000 lbs x Emission Factor (lbs/ton)

PTE of PM/PM10 (tons/yr) = Max. Process Rate (lbs/hr) x 1 ton/2000 lbs x Emission Factor (lbs/ton) x 8760 hrs/yr x 1 ton/2000 lbs